

### **Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

#### **Listing of Claims:**

Claim 1 (currently amended): A method of routing in an Internet Protocol data network, which comprises:

receiving a data packet originating from a calling user by a network node in the Internet Protocol data network;

assigning a first piece of information contained in the data packet to a second piece of information available to the network node, the second piece of information relating to at least one of a the calling user and services available to the calling user in the Internet Protocol data network;

determining, with the network node, a route for the data packet through the Internet Protocol data network to a destination address within the Internet Protocol data network by determining at least one further network node within the Internet Protocol data network through which the route passes based on the second piece of information;

passing on the data packet to a next network node on the determined route to the destination address within the Internet Protocol data network; and

uniquely determining the route of the data packet from the network node to a defined node of available nodes within the Internet Protocol data network; and

upon receiving the data packet by the destination address, sending a response packet from the destination address to the calling user over the IP data network.

Claim 2 (canceled).

Claim 3 (original): The method according to claim 1, which comprises determining from the first piece of information contained in the data packet at least one detail of a desired transmission selected from the group consisting of a user, a destination address, a service provider, a quality, costs, and a security level.

Claim 4 (original): The method according to claim 1, which comprises composing at least one of a source address and the destination address of a plurality of address components.

Claim 5 (previously presented): The method according to claim 1, which comprises sending the data packet to a specific entity in the Internet Protocol data network and processing the data packet at the specific entity, if the destination address contained in the data packet is incorrect.

Claim 6 (previously presented): The method according to claim 1, which comprises sending the data packet to a specific entity in the Internet Protocol data network and

processing the data packet at the specific entity, if the destination address contained in the data packet is unknown.

Claim 7 (original): The method according claim 1, which comprises passing a response data packet, sent in response to the data packet, from the destination address to a source address through the further network node.

Claim 8 (original): The method according to claim 1, which comprises changing a source address in the data packet with the network node on its way from the source address to the destination address.

Claim 9 (original): The method according to claim 8, which comprises reversing the step of changing the source address with the network node.

Claim 10 (original): The method according to claim 8, which comprises entering in a response data packet, sent in response to the data packet, on its way from the destination address to the changed source address a corrected source address with the network node.

Claim 11 (original): The method according to claim 7, which comprises applying a network address translation to at least one of the data packet and the response packet.

Claim 12 (original): The method according to claim 1, which comprises accessing a further network having a plurality of access points and the destination address

located in the further network, by using only one of the plurality of access points at a time.

Claim 13 (previously presented): The method according to claim 1, which comprises providing an information service as the destination address, the information service being accessible by a user only after the user is registered in the service, and providing further information services accessible to the user at the same time.

Claim 14 (original): The method according to claim 1, which comprises encrypting the data packet.

Claim 15 (previously presented): The method according to claim 1, which comprises providing details concerning a source address in a central database, the details including a basic state relating to a usage authorization of services existing in the Internet Protocol data network.

Claim 16 (previously presented): The method according to claim 1, which comprises denying an unauthorized user a use of a service provided in the Internet Protocol data network by sending a data packet of the unauthorized user to a specific entity in the Internet Protocol data network and generating an error message with the specific entity.

Claim 17 (previously presented): The method according to claim 1, which comprises denying an unauthorized user a use of a service provided in the Internet Protocol

data network by generating an error message upon sending a data packet of the unauthorized user, and sending the error message to the unauthorized user.

Claim 18 (previously presented): The method according to claim 1, which comprises:

providing an authorization for a user for using services provided in the Internet Protocol data network for which the user is not registered;

sending a data packet of the user to a specific entity in the Internet Protocol data network; and

generating an error message with the specific entity.

Claim 19 (previously presented): The method according to claim 1, which comprises charging a user based on at least one criterion selected from the group consisting of a time, a volume, a number of accesses, services used, a type of data packets, and a transmission quality, the at least one criterion being collected as information in the Internet Protocol data network node during a routing.

Claim 20 (original): The method according to claim 1, which comprises charging a service provider based on at least one criterion selected from the group consisting of a time, a volume, a number of accesses, services used, a type of data packets, and a transmission quality, the at least one criterion being collected as information in the network node during a routing.

Claim 21 (previously presented): The method according to claim 1, wherein the Internet Protocol data network includes at least one of a communication network and a further data network.

Claim 22 (currently amended): An apparatus for routing data packets of a calling user in an Internet Protocol data network, comprising:

a processor for receiving, processing, and passing on the data packets originating from the calling user;

a first storage operatively connected to said processor for storing supplemental information relating to at least one of a user and services existing in the Internet Protocol data network;

a second storage operatively connected to said first storage for storing administrative information;

a mapper operatively connected to said first storage for determining a mapping of logic computer names on network addresses and vice versa and for translating a logic computer name of the called user to a network address of the called user; and

a router operatively connected to said processor for determining a route for each of the data packets received from a calling user, on the basis of information gathered from the data packets and the stored supplemental information relating to at least

one of the calling user and the services available to the calling user in the Internet Protocol data network, said router determining at least one node through which the route passes.

Claim 23 (original): The apparatus according to claim 22, wherein said router determines a unique path to an interchange point by a virtual connection.

Claim 24 (previously presented): The apparatus according to claim 22, including a server having access to said first storage including at least one of authentication data, access data, and charge data.

Claim 25 (previously presented): The apparatus according to claim 22, including an interface operatively connected to said first storage, said interface being configured to enable a user to modify the supplemental information.

Claim 26 (previously presented): The apparatus according to claim 22, including a helpdesk for offering a help option to the user upon occurrence of an error during an access to one of the services in the Internet Protocol data network and for sending a message with information about the error to the user.

Claim 27 (original): The apparatus according to claim 26, wherein the helpdesk offers an alternative service upon the occurrence of the error during the access.

Claim 28 (original): The apparatus according to claim 26, including a user interface for implementing at least one of the access and the help option.

Claim 29 (original): The apparatus according to claim 28, wherein said user interface communicates through the use of a suitable protocol.

Claim 30 (original): The apparatus according to claim 22, wherein said processor is a routing engine, said first storage is a user management system, said second storage is a service management module, said mapper is a DNS proxy server, and said router is a routing information module.

Claim 31 (previously presented): The method according to claim 1, which comprises:

receiving the data packet from a user who is not authorized for a requested service or action; and

providing a help desk for the user to get authorized for using the service or action.

Claim 32 (previously presented): The method according to claim 1, which comprises:

receiving the data from a user who is not authorized for requested services or action; and

providing a help desk for the user to get authorized to select various switching and information services or one of different service providers without having to clear a connection.



Claim 33 (previously presented): The method according to claim 1, which comprises:

determining a source information from the first piece of information from the data packet;

assigning the source information to a user;

determining providers of switching services or information services that are accessible to the user;

selecting from the switching services that are accessible to the user, those which offer transport of the data packet to a desired destination address;

determining further boundary parameters from additional details in the data packet or from additional information which is assigned to the user and which can further limit selection of the switching services or the information services;

picking from selected switching services, switching services whose boundary parameters best match those of the user; and

assigning finally selected switching services and destination addresses that can be accessed from a user profile in a database, and then passing on the data packet.

Claim 34 (previously presented): The apparatus according to claim 26, comprising a user interface providing an authorization of the user for using services provided in

the Internet Protocol data network after occurrence of an error because the user is not registered.

Claim 35 (previously presented): The apparatus according to claim 26, comprising means for selecting various switching and information services or selecting one of different service providers without having to clear a connection.

Claim 36 (previously presented): A method of routing in an Internet Protocol data network, which comprises:

receiving a data packet originating from a given user in a network node of the Internet Protocol data network;

defining information contained in the data packet as a first piece of information, acquiring a second piece of information relating to at least one of the given user and services available to the given user in the Internet Protocol data network, and correlating the first and second pieces of information in the network node;

determining a route for the data packet through the Internet Protocol data network to a destination address within the Internet Protocol data network by determining at least one further network node through which the route passes based on the second piece of information;

passing on the data packet to a next network node on a uniquely determined route of the data packet from the network node to a defined node of available nodes within the Internet Protocol data network and to the destination address ; and

responding from the destination address by transmitting one or more data packets through the Internet Protocol data network to the calling user.

Claim 37 (currently amended): An apparatus for routing data packets from a calling user to a called user in an Internet Protocol data network, comprising:

a processor for receiving, processing, and passing on the data packets originating from a the calling user;

a first memory device operatively connected to said processor for storing supplemental information relating to at least one of a user and services existing in the Internet Protocol data network;

a second memory device operatively connected to said first memory device for storing administrative information;

a mapper operatively connected to said first memory device for determining a mapping of logic computer names on network addresses and vice versa and for translating a logic computer name of the called user to a network address; and

a router operatively connected to said processor for determining a route for each of the data packets, on the basis of information gathered from the data packets and the stored supplemental information each relating to at least one of the calling user and the services available to the calling user in the Internet Protocol data network, said router determining at least one node through which the route passes.